

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* EDWARD G. CALLWAY, ALLEN J. C. PORTER,  
CHUN-CHIN DAVID YEH and PHILIP L. SWAN

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Appeal 2006-1828  
Application 09/213,748<sup>1</sup>  
Technology Center 2600

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Decided: February 27, 2007

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Before FRED E. MCKELVEY, *Senior Administrative Patent Judge*, ALLEN R. MACDONALD, and JAY P. LUCAS, *Administrative Patent Judges*.

MACDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

AFFIRMED-IN-PART

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<sup>1</sup> Application filed December 17, 1998. The real party in interest is ATI International, SRL.

### STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 (2002) from a final rejection of claims 2-4, 6-11, 14, 17-23, 26-30 and 38. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

The Examiner rejected claims 2-4, 6-11, 14, 17-23, 26-30 and 38 under 35 U.S.C. § 103(a) (Final 2-8).

The prior art references relied upon by the Examiner in rejecting the claims on appeal are:

Fujimoto	US 5,912,710	Jun. 15, 1999
Porter	US 6,208,354	Mar. 27, 2001

The Examiner indicated that claims 31-37 are allowable (Final 9). The Examiner objected to claims 12, 13, 24 and 25 as allowable but dependent on rejected claims (Final 9). Applicants cancelled claims 1 and 5. The Examiner withdrew the rejection of claims 15 and 16 (Answer 11).

Claim 4 is representative of the claimed invention and is reproduced as follows:

A video graphics display engine comprising:

a video scaler adapted to receive a video data stream in a first format, wherein the video scaler scales video images in the video data stream based on a ratio between the video images in the first format and an output video image to produce a scaled video stream;

a graphics scaler adapted to receive a graphics data stream in a second format, wherein the graphics scaler scales graphics images in the graphics data stream based on a ratio between the graphics images in the second format and an output graphics image to produce a scaled graphics stream;

a merging block operably coupled to the video scaler and the graphics scaler, wherein the merging block combines the scaled video stream and the scaled graphics stream to produce a video graphics output stream; and  
a single frame buffer operably coupled to the graphics scaler and to the video scaler, the single frame buffer further comprises a first memory block and a second memory block, wherein the stream of video data is fetched from the first memory block and the stream of graphics data is fetched from the second memory block.

A copy of the remaining claims under appeal is set forth in the appendix to the Appellants' brief.

Appellants contend the Examiner has erred because (1) Fujimoto teaches away from the alleged combination with Porter (Br. 8); (2) the Examiner has provided only broad conclusory statements of a motivation to combine the references (Br. 16); and (3) the Examiner has failed to demonstrate the prior art teaches or suggests each claim limitation (Br. 21).

The Examiner contends (1)(a) "Fujimoto does not discourage pursuing a display system including a frame buffer that stores both video and graphics information" (Answer 6); (1)(b) combination of the references would not result in the modification of Fujimoto in a manner unsatisfactory for its intended purpose or in redundant operations and structure (Answer 8); (2) Porter's teaching of substitution suggests a variation that is applicable to the system of Fujimoto (Answer 10); and (3) Fujimoto teaches the limitations of claims 18 and 29 (Answer 11).

We affirm the decision of the Examiner rejecting claims 2-4, 6-11, 14, 17, 19-23, 26-28, 30 and 38. We reverse the decision of the Examiner rejecting claims 18 and 29.

## ISSUES

The issues before the Board are:

(1) Whether Appellants have established the Examiner erred in rejecting claims 2-4, 6-11, 14, 17-23, 26-30 and 38 under 35 U.S.C. § 103 because:

(a) Fujimoto teaches away from the claimed subject matter; and

(b) the modification of Fujimoto:

(i) is unsatisfactory for its intended purpose; and

(ii) results in redundant operations and structure?

(2) Whether Appellants have established the Examiner erred in rejecting claims 2-4, 6-11, 14, 17-23, 26-30 and 38 under 35 U.S.C. § 103 because the Examiner used hindsight reasoning, i.e., there no reason to combine the teachings of Fujimoto and Porter?

(3) Whether Appellants have established the Examiner erred in rejecting claims 18 and 29 under 35 U.S.C. § 103 because claimed limitations are not taught or suggested by Fujimoto and Porter?

## FINDINGS OF FACT

The following findings of fact are believed to be supported by a preponderance of the evidence.

1. Appellants invented a method and apparatus for independent video and graphics scaling in a video graphics system (Specification 1).

2. In prior art systems, separately generated video information and graphics information are first combined, and then the combined information is scaled (Specification 1-2).

3. In Appellants invention, separately generated video information and graphics information are first scaled, and then the scaled information is combined (Specification 2-3).

4. Independent scaling of video data and graphics data is important in maintenance of proper aspect ratios (Specification 3-4).

5. Fujimoto discloses mixed data including computer graphics data and motion picture data stored on a media (col. 1, ll. 34-35).

6. Fujimoto discloses the mixed data is typically stored on the media as compressed data using digital compression coding (col. 1, ll. 35-37).

7. Fujimoto discloses an optical disk, such as a compact disk (CD) or a digital versatile disk (DVD), are typically used as the data storing media (col. 1, ll. 37-39).

8. Fujimoto discloses controlling interactively a display of combined images of graphics data and motion picture data stored on a DVD on a television monitor with improved quality (col. 3, ll. 14-17).

9. The DVD in Fujimoto is not the original source of the graphics data and motion picture data because these data are stored on the DVD.

10. Fujimoto discloses that one of many objects of the invention is to provide for controlling a display of mixed images of graphics and video data on a video monitor by an effective pipeline operation of scaling and filtering the

graphics data without using large expensive video memory (col. 2, l. 65, through col. 3, l. 2).

11. Fujimoto discloses at figure 1, apparatus 300 which reads out graphics data 100G and video data 100B (also referred to as "motion picture data") recorded on DVD media 100 and generates image signals for displaying blended images comprising the graphics data and motion picture data on television monitor 200 which has a particular display aspect ratio (col. 5, ll. 9-14).

12. Fujimoto discloses the image display control apparatus 300 is comprised of a DVD ROM drive 101, a MPEG2 decoder 102, a video memory, such as a volatile random access memory (VRAM) 103, a color data controller 104 that includes a RGB color palette 104a and a color space converter 104b, a display controller 155 (col. 5, ll. 15-20).

13. A DVD ROM is a read only memory (ROM). A DVD ROM is write once read many (WORM) type storage.

14. Fujimoto discloses a filtering circuit 105 and a first scalar 106, for changing pixel aspect ratio of the graphics data 100G, a second scalar 107 for changing a size of the motion picture data 100B so that it fits in a video window of a given size on the monitor 200, a  $\alpha$ -blending circuit 108 and an NTSC/PAL encoder 109 for providing image signals to the television monitor 200 (col. 5, ll. 21-26).

15. Fujimoto fails to disclose a single frame buffer memory.

16. Porter discloses in figure 1, a video graphics circuit that includes a memory 10, a display overlay engine 30 and a controller 40 (col. 2, ll. 40-42).

17. Porter discloses the memory 10 stores graphics information for display (col. 2, ll. 45-46).

18. Porter discloses the memory 10 may be a single memory device or a plurality of memory devices where such memory devices may included read-only memory, random access memory, floppy disk memory, hard disk memory, system memory, reprogrammable memory, magnetic tape memory, DVD memory, and/or any device that stores digital information (col. 2, ll. 46-52).

19. Porter discloses that preferably, the memory 10 is a dynamic random access memory that is utilized as a frame buffer within the video graphics circuit, such that, the memory 10 may also store video data block 15 that includes the video data for display (col. 2, ll. 53-57).

20. The level of skill in the art is apparent from Fujimoto and Porter. Additional facts as necessary appear in the Analysis *infra*.

#### PRINCIPLES OF LAW

The examiner bears the initial burden of presenting a prima facie case of obviousness in rejecting claims under 35 U.S.C. § 103. See *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of

the references to arrive at the claimed invention. *See Id.* and *In re Lintner*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Whether a reference teaches away from a claimed invention is a question of fact. *In re Harris*, 409 F.3d 1339, 1341, 74 USPQ2d 1951, 1953 (Fed. Cir. 2005).

On appeal, Applicant bears the burden of showing that the Examiner has not established a legally sufficient basis for combining the teachings of the references. Applicant may sustain its burden by showing that where the Examiner relies on a combination of disclosures, the Examiner failed to provide sufficient evidence to show that one having ordinary skill in the art would have done what Applicant did. *United States v. Adams*, 383 U.S. 39 (1966); *In re Kahn*, 441 F.3d 977, 987-988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006); *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick, Co.*, 464 F.3d 1356, 1360-1361, 80 USPQ2d 1641, 1645 (Fed. Cir. 2006).

“A reference may be said to teach away when a person of ordinary skill, upon reading the reference would be led in a direction divergent from the path that was taken by the applicant.” *In re Haruna*, 249 F.3d 1327, 1335, 58 USPQ2d 1517, 1522 (Fed. Cir. 2001).

“[I]n general, a reference will teach away if it suggests that the line of development flowing from the reference’s disclosure is unlikely to be productive of the result sought by the applicant.” *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

“A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use.” *Id.*, 27 F.3d at 554, 31 USPQ2d at 1132.



A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim.

37 C.F.R. § 41.37(a)(1)(vii).

The use of hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is impermissible. See, for example, *W. L. Gore and Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). However, obviousness judgments are necessarily based on hindsight, but so long as judgment takes into account only knowledge known in the art, there is no impermissible use of hindsight. *In re McLaughlin*, 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971).

## ANALYSIS

*(1)(a) Whether Appellants have established the Examiner erred because Fujimoto teaches away from the claimed subject matter?*

Claims 2-4, 6-11, 14, and 17-19

Appellants' reliance on Fujimoto's statement, that one of many objects of the invention is to provide for controlling . . . without using large expensive video memory, to show a teaching away is misplaced (col. 2, l. 65, through col. 3, l. 2). Fujimoto's objective of avoiding "large expensive" video memory does not show that video memory is unlikely to be productive of the result sought by the Applicants. Rather, it merely shows that "large expensive" video memory is considered by Fujimoto to be an inferior implementation. That an implementation is inferior is not a teaching away. Additionally, Appellants present no evidence showing that the video memory of Porter is "large" or "expensive." This key

underpinning of Appellants' argument is assumed by Appellants without any credible evidentiary support.

We find Fujimoto does not teach away from the claimed subject matter.

Claims 20-23 and 26-29

Appellants point out what the claims recite and refer back to the arguments presented for claims 2-4, 6-11, 14, and 17-19. No additional arguments are presented.

Claim 30

Appellants point out what the claims recite and refer back to the arguments presented for claims 2-4, 6-11, 14, and 17-19. No additional arguments are presented.

Claim 38

Appellants point out what the claims recite and refer back to the arguments presented for claims 2-4, 6-11, 14, and 17-19. No additional arguments are presented.

*(1) (b) Whether Appellants have established the Examiner erred because the modification of Fujimoto is unsatisfactory for its intended purpose and results in redundant operations and structure?*

Claims 2-4, 6-11, 14, and 17-19

Appellants contend Fujimoto "would be inoperative for its intended purpose" in the combination proposed by the Examiner. This contention rests on Appellants' view that Fujimoto's DVD does not buffer information from another source for subsequent transmission to another entity or location. This view is

contradicted by findings of fact 5-9 and 13. Fujimoto's DVD fully meets Appellants' definition of a buffer.

Appellants also opine that the Examiner's proposed "substitution of a frame buffer for the DVD-ROM ... would render VRAM 103 and main memory 13 redundant and undesirable because a frame buffer as a read/write memory would perform the same functions a VRAM 103 and main memory 13". However, Appellants fail to point out any specific function performed by the VRAM 103 or main memory that would be redundantly performed by the frame buffer. Further, Appellants overlook the fact that in Fujimoto, the DVD ROM is a buffer. Thus, Fujimoto already has three memories (DVD, VRAM, and main memory) which are not redundant. Appellants have not shown that substitution of a different type of memory for the DVD leads to any redundancy of function.

We find the modification of Fujimoto is appropriate.

#### Claims 20-23 and 26-29

Appellants point out what the claims recite and refer back to the arguments presented for claims 2-4, 6-11, 14, and 17-19. No additional arguments are presented.

#### Claim 30

Appellants point out what the claims recite and refer back to the arguments presented for claims 2-4, 6-11, 14, and 17-19. No additional arguments are presented.

Claim 38

Appellants point out what the claims recite and refer back to the arguments presented for claims 2-4, 6-11, 14, and 17-19. No additional arguments are presented.

*(2) Whether Appellants have established the Examiner erred because the Examiner used hindsight reasoning, i.e., there no motivation to combine the teachings of Fujimoto and Porter?*

Claims 2-4, 6-11, 14, and 17-19

To establish Examiner error, Appellants repeat the arguments already addressed above that the claims require a buffer and a DVD is a source. Appellants also repeat the arguments already addressed above that the combination is redundant and undesirable. Appellants then opine that “Fujimoto alone provides no motivation” and “the Porter reference alone does not supply the necessary motivation.” We disagree. Porter teaches a DVD and a frame buffer are equivalent devices for the function of video graphics storage. See findings of fact 16-19.

We find the disclosure of Porter provides more than sufficient motivation to combine the prior art references without resorting to impermissible hindsight.

Claims 20-23 and 26-29

Appellants point out what the claims recite and refer back to the arguments presented for claims 2-4, 6-11, 14, and 17-19. No additional arguments are presented.

Claim 30

Appellants point out what the claims recite and refer back to the arguments presented for claims 2-4, 6-11, 14, and 17-19. No additional arguments are presented.

Claim 38

Appellants point out what the claims recite and refer back to the arguments presented for claims 2-4, 6-11, 14, and 17-19. No additional arguments are presented.

*(3) Whether Appellants have established the Examiner erred because claimed limitations are not taught or suggested by Fujimoto and Porter?*

Claims 18 and 29

Appellants correctly points out the section of Porter (Fig. 1 and Fig. 17; col. 15, ll. 10 et seq.) cited by the Examiner fails to disclose or suggest a graphics decompression block as required by claims 18 and 29. The Examiner has not shown that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests a graphics decompression block. Further, we find no disclosure or suggestion of graphic decompression anywhere in the Porter reference.

CONCLUSIONS OF LAW

(1) Appellants have failed to establish that the Examiner erred in rejecting claims 2-4, 6-11, 14, 17-23, 26-30 and 38 as being unpatentable under 35 U.S.C. § 103(a) over Fujimoto and Porter.

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(2) Claims 2-4, 6-11, 14, 17-23, 26-30 and 38 are not patentable.

(3) Appellants have established that the Examiner erred in rejecting claims 2-4, 6-11, 14, 17-23, 26-30 and 38 as being unpatentable under 35 U.S.C. § 103(a) over Fujimoto and Porter.

(4) On this record, claims 18 and 19 have not been shown to be unpatentable.

#### DECISION

We affirm the Examiner's rejection of claims 2-4, 6-11, 14, 17, 19-23, 26-28, 30 and 38.

We reverse the Examiner's rejection of claims 18 and 29.

#### AFFIRMED-IN-PART

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